



## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 7  
901 NORTH 5TH STREET  
KANSAS CITY, KANSAS 66101

MAR 18 2008

Mr. Phil Schroeder  
Missouri Department of Natural Resources  
Water Pollution Control Branch  
P. O. Box 176  
Jefferson City, MO 65102-0176

Dear Mr. Schroeder:

This letter transmits the comments of the United States Environmental Protection Agency (EPA) on the document entitled *Missouri Antidegradation Rule and Implementation Procedure* (the Procedure), which the Missouri Department of Natural Resources (MDNR) publicly noticed for comment as part of the proposed rulemaking to incorporate the document by reference into the state water quality standards (WQS) at 10 CSR 20-7.031(2)(D). EPA appreciates the opportunity to comment on the Procedure that was adopted by the Clean Water Commission on April 20, 2007.

EPA submitted comments on previous drafts of the Procedure by letter dated February 15, 2007. In that letter, EPA discussed the settlement agreement it entered into with the Missouri Coalition for the Environment (MCE), whereby the Agency agreed to determine by April 30, 2007, whether new or revised WQS are necessary to meet the requirements of the Clean Water Act (CWA) with respect to antidegradation implementation procedures. In the time since that February letter, EPA received an extension to the settlement agreement deadline. In the extension, EPA agreed to make its determination by September 30, 2008, unless Missouri submits new or revised WQS identifying antidegradation implementation procedures by September 1, 2008. The extension of the settlement agreement provides the following milestone and final date, which, if completed will relieve EPA of its obligation to make its determination;

- July 31, 2008 – Date by which the rule language for the Procedure is to be published.
- September 1, 2008 – Date by which the state of Missouri is to submit new or revised WQS identifying antidegradation implementation procedures.

EPA understands that Missouri is on track to meet both of these dates, and EPA encourages the state to continue its effort to submit the final WQS and rule-referenced antidegradation implementation procedures in a manner consistent with 40 CFR § 131.6\* by September 1, 2008.

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\* Federal regulations at 40 CFR § 131.6 specify the minimum requirements for a water quality standards submission, which includes certification by the State Attorney General or other appropriate legal authority that the water quality standards were duly adopted pursuant to State law.

Enclosed with this letter are EPA's comments on the April 20, 2007, *Missouri Antidegradation Rule and Implementation Procedure*. EPA is again providing these comments to obtain clarification on several items of concern prior to Missouri's final submission of the 10 CSR 20-7.031(2)(D) rule reference and the final Procedure. For all but Comment 1 (see Enclosure), EPA is not necessarily requesting changes to the actual document, but is asking that Missouri provide clarification or supporting documentation with or prior to its submission, which EPA expects to receive no later than September 1, 2008.

Thank you for providing us this opportunity to comment. We appreciate the cooperative efforts provided by you and your staff in developing this Procedure. If you have any questions please do not hesitate to call me at (913) 551-7821, or Rebecca Landewe, of my staff, at (913) 551-7861.

Sincerely,

Handwritten signature of John DeLashmit in cursive script, with the word "for" written below the signature.

John DeLashmit

Chief

Water Quality Management Branch

Enclosure

## ENCLOSURE

### EPA Comments on April 20, 2007 *Missouri Antidegradation Rule and Implementation Procedure*

#### 1. Section II.A.3. Determining Event-Specific and Cumulative Degradation

The equation for calculating facility assimilative capacity (FAC) in the Procedure (page 22) is incorrect and will result in an overestimation of the available assimilative capacity. The Procedure defines assimilative capacity as the “amount of contaminant load that can be discharged to a specific water body without exceeding the Water Quality Standards (WQS) or the criteria associated with the pollutant of concern. Assimilative capacity is used to define the ability of a water body to naturally attenuate a discharged substance without impairing beneficial uses.” The FAC is further described as “the assimilative capacity applicable to an individual facility and determined through the establishment of the existing and probable pollutant concentrations at the point where the facility’s effluent enters the segment.” The equation in the April 20, 2007, Procedure is as follows:

$$\text{FAC} = [\text{WQC} * (\text{Q}_s + \text{Q}_d) - \text{C}_s * \text{Q}_s] * \text{CF}$$

Where:

WQC = water quality criterion (represented as a concentration, e.g., mg/L)

Q<sub>s</sub> = stream flow (7Q10 or other representative flow) in cubic feet per second (cfs)

Q<sub>d</sub> = average daily design flow of discharge in cfs

C<sub>s</sub> = pollutant concentration in stream immediately below the point where the facility’s effluent enters the segment

CF = conversion factor to convert a pollutant mass loading into the desired units. For example, a CF of 5.4 to derive a load in “lbs/day” is appropriate when the WQC is represented in mg/L and flow is represented in cfs [(mg/L) \* (cfs) \* 5.4] = (lbs/day)].

The equation for calculating assimilative capacity is comprised of three basic parts: (1) the maximum pollutant load allowed by the water quality criterion, (2) the existing in-stream pollutant load, and (3) the conversion factor to obtain the correct units.<sup>1</sup> If there is currently no discharge to the stream, the maximum pollutant load allowable is a product of the water quality criterion (WQC) and the total proposed flow (stream flow, Q<sub>s</sub>, plus proposed discharge, Q<sub>d</sub>). To calculate the existing in-stream pollutant load, the in-stream concentration (C<sub>s</sub>) is multiplied by the stream flow (Q<sub>s</sub>). Missouri’s equation above is suitable for calculating the FAC for proposed *new* discharges into streams.

However, the equation is not appropriate for a proposed expansion to an *existing* discharge. Under Missouri’s Procedure, existing sources are included in the determination of existing water quality. As such, to calculate the FAC for a proposed expansion, it is necessary to look at the *remaining* assimilative capacity of the stream by taking into account the current load of the existing discharge. To do this, Missouri’s equation needs to be modified to include the flow of the existing discharge added to the stream flow before multiplying that by the downstream pollutant concentration (C<sub>s</sub>\*(Q<sub>s</sub>+Q<sub>d1</sub>)). Without this modification, the equation

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<sup>1</sup> Note: The conversion factor is necessary to obtain the correct units. To simplify the description here, the conversion factor is not discussed in each element of the equation and is assumed to be applied as the final calculation.

overestimates the available assimilative capacity and underestimates the significance of the discharge. EPA suggests adopting the equations below or making other appropriate revisions to the existing equation such that it accurately calculates the assimilative capacity for existing (expanding) discharges. Further, EPA recommends correcting the example calculations in Appendix 3. See additional comments below regarding Appendix 3.

(1) FAC for proposed new discharges =  $[WQC*(Q_s+ Q_{d2}) - C_s*Q_s]*CF$

(2) FAC for existing (expanding) discharges =  $[WQC*(Q_s+Q_{d2}) - C_s*(Q_s+Q_{d1})]*CF$

Where:

WQC = water quality criterion (represented as a concentration, e.g., mg/L)

$Q_s$  = stream flow (7Q10 or other representative flow) in cubic feet per second (cfs)

$Q_{d1}$  = average daily design flow of existing discharge (cfs)

$Q_{d2}$  = average daily design flow of new or expanded discharge (cfs)

$C_s$  = pollutant concentration in stream immediately below the point where the facility's effluent enters the segment

$C_{d1}$  = existing discharge concentration (mg/L)

$C_{d2}$  = new or expanded discharge concentration (mg/L)

CF = conversion factor to convert a pollutant mass loading into the desired units. For example, a CF of 5.4 to derive a load in "lbs/day" is appropriate when the WQC is represented in mg/L and flow is represented in cfs  $[(mg/L) * (cfs) * 5.4] = (lbs/day)$ .

## 2. Unclassified Waters

The January 29, 2007, draft Procedure stated that the "absence of a criterion does not preclude the department from developing an available loading value for pollutants as part of their review of a permit application." This language provided flexibility to the department in exercising best professional judgment for addressing pollutants covered under Missouri's narrative criteria that apply to unclassified waters (e.g., nutrients and sediments). EPA commented in its February 15, 2007, letter that it supported the inclusion of this language. The provision, however, was deleted from the March 23, 2007, draft and is not contained in the final April 20, 2007, version of the Procedure. The April 20, 2007, version of the document is silent on discussing how MDNR will conduct antidegradation reviews for unclassified waters and the applicable narrative and numeric criteria that apply to those waters. As a result, it is difficult to understand how assimilative capacity will be calculated and, in turn, how the potential for degradation will be evaluated.

However, despite the lack of detail regarding how unclassified waters will be reviewed under the antidegradation policy, Missouri's Procedure clearly states that all waters of the state are subject to the Procedure (page 10). As such, EPA understands that MDNR will apply its antidegradation implementation procedures and conduct full Tier 2 reviews, when necessary, to unclassified waters. In addition, despite the fact that MDNR deleted the above-quoted sentence from its April 20, 2007, version, EPA expects that MDNR will evaluate the available assimilative capacity of unclassified waters for the applicable narrative criteria (i.e., General Criteria at 10 CSR 20-7.031(3)) and numeric criteria (i.e., acute toxicity criteria in 10 CSR 20-7.031, Table A, as prescribed by 10 CSR 20-7.031(3)(I)) when conducting antidegradation reviews. To address this point, EPA requests that MDNR clarify how it will conduct

antidegradation reviews on unclassified waters and include such clarification in its final rule to be submitted to EPA.

### **3. Page 7 – Pollutant of Concern**

EPA commented in its February 15, 2007, letter about the definition of “pollutant of concern,” raising the issue about some potentially limiting language that excluded pollutants or combinations of pollutants without numeric criteria. EPA does not object to the revised definition in the April 20, 2007, Procedure, but requests that Missouri clarify with its submission that the current definition of “pollutants of concern” is not limited to just those pollutants with numeric criteria, but also includes other pollutants covered by the state’s narrative criteria that have the potential to degrade water quality.

### **4. Page 14 – Section I.C. Revising Tier Review Levels**

The first paragraph reads:

*The department may also change a review level from Tier 2 to Tier 1 if a pollutant reaches the levels explained in Section I.B.1 of this document.*

The intent of the antidegradation policy is to prevent the degradation of high quality waters (Tier 2). However, the antidegradation policy allows states to consider important social and/or economic development in making water quality choices. If, after a Tier 2 review, a state demonstrates that a lowering of water quality is necessary to accommodate important social or economic development in the area in which the water(s) is (are) located, then the water quality may be lowered, but must always remain protective of the existing and designated uses. According to Missouri’s Procedure, the assigning of Tier review levels depends upon the existing water quality (EWQ), which is defined as “a characterization of the current (approved) level of the pollutant of concern...” and “once established, EWQ is a fixed quantity/quality...” (page 6). The statement about revising Tier review levels could appear to be inconsistent with the Procedure’s definition of EWQ. However, the Procedure also recognizes the need for statistical confidence in establishing EWQ and allows for EWQ to be reevaluated “if it is shown that an error in determining EWQ or additional data collection significantly increases the certainty of the results” (page 19). Without clarification, the provision above suggests that the Tier review level could be revised by a change in the levels of pollutants, rather than a revision to the initial assessment of EWQ. EPA supports the current definition of EWQ, and based upon that definition it is EPA’s understanding that the revision from Tier 2 to Tier 1 would only occur after a Tier 2 review demonstrates that lowering the water quality is necessary to accommodate important social and economic development in the area in which the water is located, consistent with the federal regulations at 40 CFR § 131.12, or, as described in Missouri’s Procedure, if there was an error in determining EWQ or additional data collection significantly increases the certainty of the results. EPA requests that Missouri clarify the intent of the language in the Procedure about revising tier levels.

**5. Page 16 – Section II.A. Combined and Sanitary Sewer Overflows (CSOs and SSOs)**

The fourth bullet states:

*Combined and sanitary sewer overflows (CSOs and SSOs) control projects resulting in a net decrease in the overall **pollutant** loadings to surface waters shall be excluded from review requirements. Treatment byproducts of CSO and SSO discharges should also be excluded from review requirements.*

EPA understands the need to encourage treatment of CSO and SSO discharges. However, the basis for the exemption is not well-defined and it seems inconsistent with the State’s antidegradation policy to exclude an entire class of pollutants (i.e., the treatment byproducts). As such EPA requests that the State provide clarification on what is meant by the phrase “overall pollutant loadings” and provide additional information about the technical basis for exempting treatment byproducts from antidegradation review requirements.

**6. Page 21 – Section II.A.1.(d) Interpreting Data on Existing Water Quality**

The Procedure specifies that the 90<sup>th</sup> percentile of at least 5 samples is greater than or equal to 95 percent of applicable WQS. The April 20, 2007, Procedure improves upon earlier drafts by stating that “all consideration should be given to the distributional and statistical properties of the data to ensure that appropriate statistical tests are utilized.” The Appendix 2 is provided as an example approach, rather than a prescribed method as it was in previous drafts. However, the water quality criterion are developed in a manner reflecting the desired use protection with identified magnitude, duration, and frequency (e.g., acute and chronic impacts, aquatic life needs, human health impacts, etc.). EPA requests that Missouri more fully describe the statistical approaches it intends to use and clarify how those methods will provide an appropriate representation of the existing water quality with consideration of the magnitude, duration, and frequency of criterion exceedances in assigning tiers.

**7. Page 28 – Section II.C. Review for Conformance to Technology-Based Requirements**

EPA requests that Missouri explain the intent of the final sentence in this section, which states:

*Appropriate enforcement action and/or compliance schedules on facilities that are out of compliance will satisfy the assurance requirement.*

**8. Page 35 – Section III.A. General Permits**

The Procedure identifies *when* the State intends to address antidegradation reviews for the general permit templates, but is not specific in explaining *how* Missouri intends to conduct reviews for the templates and the specific discharges authorized under general permits. EPA requests that Missouri provide additional information and clarity on how the Procedure will be

applied to the review of the templates and specific applicants requesting coverage under a general permit. Specifically, EPA requests that, where MDNR has data or information indicating that a water body is being impacted by pollutants that could be discharged from facilities or activities covered under a general permit, Missouri clarify the steps it will take to conduct antidegradation reviews to ensure that water quality is not significantly degraded prior to a demonstration of social and/or economic benefit.

#### **9. Page 37 – Section III.C. §401 Certifications**

The Procedure states that “the decision making process for §404 individual permits is contained in the §404(b)(1) guidelines (40 CFR Part 230) and contains all of the required elements for a Tier 1 and Tier 2 review.” Regarding Tier 1 reviews (40 CFR § 131.12(a)(1)), EPA’s *Water Quality Standards Handbook* (Second Edition, 1994), states:

*A literal interpretation of 40 CFR 131.12(a)(1) could prevent certain physical modification to a water body that are clearly allowed by the Clean Water Act, such as wetland fill operations permitted under section 404 of the Clean Water Act. EPA interprets section 131.12(a)(1) of the antidegradation policy to be satisfied with regard to fills in wetlands if the discharge did not result in “significant degradation” to the aquatic ecosystem as defined under section 230.10(c) of the section 404(b)(1) Guidelines.*

Regarding Tier 2 reviews (40 CFR § 131.12(a)(2)), the Handbook states that “if any wetlands were found to have better water quality than ‘fishable/swimmable,’ the State would be allowed to lower water quality to the no significant degradation level as long as the requirements of section 131.12(a)(2) were followed.” EPA requests that Missouri identify the portions of its §404 decision making process that are consistent with the elements of a Tier 2 review, as described in federal regulations at 40 CFR § 131.12(a)(2).

#### **10. Page 41 – Appendix 2**

See Comments 6.

#### **11. Page 42 – Appendix 3**

The examples in Appendix 3 use an incorrect equation. First, it is not consistent with the equation provided on page 22 of the document as it replaces the in-stream pollutant concentration immediately below the effluent ( $C_s$ ) with existing water quality (EWQ). Second, as noted above, MDNR’s equation does not correctly calculate the FAC for new or existing discharges. In discussing the issue with MDNR, it appears that some changes were made to the definition of the terms of the equation on page 22 during the drafting of the Procedure, which were not carried over to the examples provided in Appendix 3. The examples should be reworked based on appropriately revised equations (see Comment 1).

» Fw: Comments on Antidegradation Rule and Implementation Procedure - Donna Menown/WPCP/DEQ/MODNR



**Phil Schroeder/WPCP/DEQ/MODNR**

03/19/2008 04:35 PM

To Donna Menown/WPCP/DEQ/MODNR@MODNR  
cc  
bcc  
Subject Fw: Comments on Antidegradation Rule and Implementation Procedure

----- Forwarded by Phil Schroeder/WPCP/DEQ/MODNR on 03/19/2008 04:34 PM -----



**Landewe.Rebecca@epamail.epa.gov**

03/18/2008 08:19 PM

To phil.schroeder@dnr.mo.gov  
cc Delashmit.John@epamail.epa.gov,  
Bagley.Melissa@epamail.epa.gov  
Subject Comments on Antidegradation Rule and Implementation Procedure

Phil,  
Attached are EPA's comments on Missouri's Antidegradation Rule and Implementation Procedures.  
There is a cover letter and Enclosure. Hard copy will follow.

Thank you,

Rebecca Landewe

US EPA Region 7  
901 N. 5th St.  
Kansas City, KS 66101  
913-551-7861



Fax: 913-551-9861 Antideg Comments to MDNR\_031808.pdf Antideg Comments to MDNR\_Enclosure\_031808.pdf

STATE OF MISSOURI  
**DEPARTMENT OF NATURAL RESOURCES**

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www.dnr.mo.gov

April 15, 2008

Mr. John DeLashmit  
U.S. Environmental Protection Agency  
Region VII  
901 North Fifth Street  
Kansas City, KS 66101

Dear Mr. DeLashmit:

Thank you for your letter transmitting comments from the United States Environmental Protection Agency (EPA) dated March 18, 2008, regarding the proposed amendment to Missouri's Code of State Regulations at 10 CSR 20-7.031(2). This proposed rule amendment pertains to the state's antidegradation policy and incorporates, by reference, the *Missouri Antidegradation Rule and Implementation Procedure* (AIP) adopted by the Missouri Clean Water Commission on April 20, 2007.

EPA requests clarification on several aspects of the AIP. The department understands that EPA is not requesting changes be made to the AIP, but rather requests clarification to ensure that the AIP is consistent with federal rules at 40 CFR 131.12. The Missouri Department of Natural Resources (the department) is providing the requested clarifications through this letter and its enclosure.

The department is committed to providing to EPA a final procedure and effective changes to Missouri's Water Quality Standards regarding the implementation of the antidegradation rule by no later than September 1, 2008. We appreciate the time EPA has taken to assist the department in developing the changes and we trust our final submittal to EPA will support a determination from EPA that Missouri's Water Quality Standards are consistent with 40 CFR 131.12. If you have any questions concerning this letter or the department's response to EPA's comments on the AIP and proposed rule amendment, please contact me at P.O. Box 176, Jefferson City, Missouri 65102 or at (573) 751-6770.

Sincerely,

WATER PROTECTION PROGRAM

*Signed by Phil Schroeder*

Philip A. Schroeder, Chief  
Water Quality Monitoring and Assessment Section

PAS:lsm

Enclosure

MDNR Responses to EPA Comments on Proposed Rule Amendment 10 CSR 20-7.031(2) - Incorporation by Reference of the *Missouri Antidegradation Implementation Procedure*

1. Section II.A.3 Determining Event-Specific and Cumulative Degradation

The department agrees that clarification is needed concerning how the facility assimilative capacity (FAC) is calculated. The narrative sections of the document clearly state that existing discharges are to be included in the calculation of FAC; however, the example equations in Appendix 3 do not clearly demonstrate how the existing loads are considered when determining existing water quality. As EPA points out, the examples indicate that the FAC is determined from *upstream* water quality, which implies that existing discharges are not calculated into the FAC.

The correct interpretation of the procedure's intent is found in the AIP narrative. The purpose of making allowances for pre-existing discharges is to ensure that the antidegradation review does not target the reduction or elimination of discharges already approved by issued permits. The AIP focuses the review on the FAC that would remain following the water's receipt of pollutant loads from existing, new and/or expanding facilities once full design flow and maximum allowable pollutant loads are reached. Therefore, the equations in Appendix 3 of the AIP should include a factor (i.e.  $Qd_1$ ) that clearly shows how the existing approved discharge is calculated into the FAC in addition to the new or expanding loads.

EPA provides a good example of how to revise the example equations in Appendix 3 to better ensure inclusion of existing discharges into determining the FAC. Furthermore, the department does not anticipate any objections to this clarification from stakeholders as this change would be consistent with the narrative portion of the AIP. Therefore, the department wishes to take this opportunity to incorporate the clarification suggested by EPA through a revision to the AIP. Such revision will be presented as part of the draft Order of Rulemaking presented to the Clean Water Commission on May 7, 2008. Draft revisions to the example calculations in Appendix 3 are provided as further attachment to this response. The department trusts that EPA will find these revisions satisfactory in clarifying the methods for determining the FAC.

2. Unclassified Waters

Prior to the approval of a new or expanded discharge, the department will conduct at least a Tier 1 antidegradation review on the receiving water, whether classified or not. Permits to discharge to unclassified waters must undergo at least a Tier 1 antidegradation review to determine if the water body supports existing or attainable uses. Most unclassified waters will support some aquatic life, making it likely that most discharges will undergo some level of antidegradation protection. Unclassified waters already receiving a discharge that create an effluent dominated stream capable of supporting uses, would undergo a Tier 2 antidegradation review if the existing stream quality would be lowered by the expanding discharge. A Tier 1 review would be provided to unclassified waters that support existing or attainable use and where pollutant levels are at, near or exceed water quality standards.

3. Page 7 - Pollutant of Concern

The department will require an antidegradation review for any discharge that contains new or expanded loads of a pollutant that meets the definition of a Pollutant of Concern (POC). The review would be at the Tier 2 protection level where the discharge of the POC would result in significant lowering the quality of the receiving waterbody. This level of protection (Tier 2) would be provided for all waters that support existing or attainable uses, regardless of classification.

A POC is defined as "discharged pollutants, or pollutants proposed for discharge that affect beneficial use(s) in waters of the state. POCs include pollutants that create conditions unfavorable to beneficial uses in the water body receiving the discharge or proposed to receive the discharge. For example, where pH, temperature, and dissolved oxygen are in noncompliance with applicable numeric criteria."

Therefore, for a pollutant to trigger a Tier 2 antidegradation review, its effect on beneficial uses must be understood and must be quantifiable. It is not necessary that a numeric criterion be established in the Water Quality Standards for the pollutant, but it is necessary that a threshold of some kind (such as a translator or surrogate criterion) be determined at which the adverse effects to beneficial uses would be expected. Without such a threshold, the FAC cannot be determined, nor can the significance of degradation be understood. Also, when such thresholds are determined, the procedure by which they are determined must be published for public review as part of the permitting process, and all comments reviewed and responded to prior to a final permit determination.

Examples of pollutants for which the department may not be able to establish a threshold from which a FAC can be determined include, for example, pharmaceuticals, endocrine disruptors and caffeine. The effects of pollutants such as phosphorus, nitrogen and sediments are better understood and therefore the department may be able to reasonably determine a FAC for these pollutants. Again, the department's rationale for determining the FAC must be open to public participation before any final permit decision is made.

4. Page 14 - Section I.C. Revising Tier Review Levels

EPA is correct in stating that the existing water quality determines the level of antidegradation protection giving to a waterbody when new or expanded discharges are proposed. Pollutants that are near, at or in exceedence of the Water Quality Standards will receive a Tier 1 review, whereas pollutants that are at levels significantly under (not at, near or in exceedence of) the standards, would receive a Tier 2 review. EPA also correctly recognizes that antidegradation reviews allow for the lowering of water quality when the discharges are necessary to accommodate important socio-economic development. Therefore, it may be possible for a waterbody to receive additional pollutants through the antidegradation review and, over time, degrade in quality down to the numeric water quality standards. While the department does not anticipate this scenario often, if it does occur, it may be appropriate to change the level of protection from Tier 2 to Tier 1 for those pollutants that are elevated to the level of being at or near the numeric water quality standard. EPA further correctly acknowledges the intent of the AIP to change the

protection level given in response to a discovery of an error in earlier determinations of existing water quality, if appropriate.

5. Page 16 - Section II.A. Combined and Sanitary Sewer Overflows (CSO and SSOs)

The department needs more experience in administering the AIP in order to fully understand how the antidegradation policy can effectively interrelate with wet weather issues. There is a general lack of federal guidance on this issue and an absence of clarity in other states as well. More time is needed to fully identify how the antidegradation rule assists in identifying the best approach to address new and expanded discharges resulting from improvements in wet weather treatment strategies.

SSOs are prohibited by the Clean Water Act; therefore, there would be no benefit to reference SSOs in the AIP, since no discharge through a SSO will be permitted. Consequently, the department is removing any reference to exemptions to SSOs in the AIP.

CSOs generally remnants of historic and large scale sewer collection systems requiring long-term solutions achieved through incremental improvements. The methods for addressing wet weather discharges are much different than the methods used to control the new or expanding discharges associated with future community growth and development. The department agrees that further clarification is needed with respect to the applicability of antidegradation reviews to treatment proposals affecting CSOs. The department is seeking clarification from EPA.

In the meantime, the department will give deference to the requirements dictated by the national CSO policies when addressing these discharges. These policies set forth distinct approaches for reducing the effects of wet weather discharges (e.g., Nine Minimum Control Measures, Long-Term Control Plan, etc.). Both the antidegradation and wet weather policies emphasize the need for maximum pollution reduction, but offer different approaches to meet that goal. The approaches needed to address the widespread, historic and long-term needs generally presented by wet weather issues require different approaches than the approaches generally used in determining appropriate wastewater treatment needed to accommodate new growth. For example, in some cases, short-term degradation may be necessary to achieve long-term improvements in streams affected by wet weather discharges. This short-term degradation may result from the redistribution of wastewater flows within a collection system or from incremental adjustments in treatment that results in the generation of by-products. By exempting certain wet weather discharges, the AIP recognizes these separate regulatory programs and supports the existing, yet different, regulatory approaches to achieve the reduction or elimination of wet weather discharges.

To avoid any interference the AIP may have with implementing the CSO policies, the department is revising the AIP to simply reference the national CSO policies in the AIP for determining future permitting decisions regarding wet weather discharges. A similar approach was used in coordinating the AIP with the 404 permitting and 401 certification activities on Page 37 of the AIP. The changes in the AIP will appear on Page 16 and clarifies that all wet weather discharges are subject to the national wet weather policies and are not subject to additional review under the AIP as long as the discharger is in compliance with these national policies.

6. Page 21 - Section IIA.1.(d) Interpreting data on Existing Water Quality

Section IIA.1.(d) of the AIP only attempts to demonstrate the quantity of data needed to make a confident conclusion about existing water quality. It is not intended that the methods to ensure data adequacy affect how the water quality criteria, or FAC, are

interpreted. To ensure this result, all data will be reviewed in context of the units of measurement used by the water quality criteria to determine compliance. For example, to ensure appropriate consideration of magnitude, duration and frequency, the pollutants for which the criteria are expressed as a geometric mean will be measured, and their existing levels (as well as the FAC) will be calculated, as a geometric mean. Determining the FAC would be through a comparison of the geometric mean of the data representing the existing pollutant concentration with the expected geometric mean of the expected pollutant concentration after the proposed discharge. Another example of how duration and frequency are considered is in how, when and where stormwater pollutants are measured. The general rule is that measurements will be made at and during critical points when the pollutant levels are likely to be at their maximum within the receiving waterbody. Defining that point may require the applicant to consider the fate and transport of the pollutant. For example, BOD may need to be measured where oxygen depletion (sag) is expected to be at its maximum within the waterbody.

The strength of an antidegradation procedure is not in how accurately it determines existing water quality. Rather, greater importance should be given on ensuring that alternative analyses are conducted whenever reasonable benefits (i.e. pollution reduction) are expected from such analyses. Attempts to finely design methods to accurately depict existing water quality would detract from the emphasis that should be placed on performing thorough reviews of feasible and achievable wastewater treatment technologies that provide the greatest reduction of pollution during new or expanding discharges.

7. Page 28 - Section II.C. review for Conformance to Technology-Based Requirements

Existing water quality is defined in the AIP as the "approved" level of a pollutant within a water body. Approved levels are the amounts expected after full implementation of treatment or pollution control activities dictated through an administrative action. These actions may be dictated as permit terms and conditions, or through an administrative agreement issued through an enforcement action. A water body under an administrative action that contains pollutants at, near or in violation of water quality standards would normally be given Tier 1 protection for those pollutants (i.e., shall be protected to maintain or achieve compliance with the numeric water quality criteria). However, any administrative action, permit or enforcement agreement that provides effective assurances for achieving a higher level of water quality (such as restoring assimilative capacity to a water body) may be the basis for requiring a Tier 2 review on future discharges from other sources. For example, if an enforcement action requires a facility to achieve technology-based limits at an outfall, and that achievement would restore a certain amount of assimilative capacity in the receiving water, the department would consider the "expected restored quality" as the approved or existing water quality. This provision protects what is to be gained from existing administrative actions. Likewise, this provision protects against other discharges being approved that avoid an antidegradation review because the water quality had not yet been restored through the administrative action. Without this provision, an antidegradation review may be limited to Tier 1 and ignore the gains (the expected assimilative capacity) to be achieved through existing administrative or enforcement

agreements. To count as an "approved" level of achievable water quality, the action providing the assurance must be an enforceable agreement, such as a permit or a signed administrative agreement.

8. Page 35 - Section III.A. General Permits

The department needs more experience in administering the AIP in order to fully understand how the antidegradation policy can effectively interrelate with the process of offering General Permits (GPs). There is a general lack of federal guidance on this issue and an absence of clarity in other states as well.

Generally, the department intends to reopen the GPs at renewal and explore options at that time to incorporate the requirements of the AIP. For example, for land disturbance permits, the department will identify Best Management Practices that satisfy the three parts of the alternative analysis, i.e. practicability, economic efficiency and affordability, for typical land disturbance scenarios. Those BMPs that are identified as measures that usually meet these criteria will be expected to be used at the permitted site. The basic premise is that the use of these BMPs will represent the highest level of pollution control generally accepted as practicable, economically efficient and affordable. The department will also explore the option of establishing a set of different GPs if needed to address scenarios (such as in sensitive watersheds) where different set of BMPs are needed to satisfy the criteria of the alternatives analysis. Whatever approach is developed, the department will want to retain the ability to offer a GP without subjecting the permit to further technical review or public participation following the receipt of an application. Otherwise, the benefits of the GP procedure would be greatly compromised if not completely eliminated.

9. Page 37 - Section III.C ss 401 Certification

The department needs more experience in administering the AIP in order to fully understand how the antidegradation policy can effectively interrelate with the process of issuing 401 Certifications. There is a general lack of specific federal guidance on this issue and an absence of clarity in other states as well.

Generally, the requirements for project design and completion specified by 404(b)(1) Guidelines Part 230.10 contain elements that satisfy 131.12(a)(2). These federal requirements ensure that each project undergoes an alternative analysis and considers practicable mitigation of impact on aquatic ecosystems. Each project is reviewed through a sequence of questions aimed at ensuring the least amount of stream degradation possible. Example questions include: 1) "Can adverse impact to the aquatic ecosystem be avoided through the selection of a least environmentally damaging practicable alternative", 2) "Can any unavoidable impacts be minimized through appropriate and practicable measures", and 3) "Can any unavoidable adverse impacts, which remain after minimizing measures have been taken, be compensated through appropriate and applicable measures".

The federal guidance also further states that no discharge shall be permitted if there is a practicable alternative which would have less impact on the aquatic ecosystem. An alternative is practicable if it is available and capable of being done after taking into consideration cost, existing technology and logistics.

Therefore, each 401 certification provides assurance that each project is designed following an alternatives analysis and an examination of available methods to mitigate impact. If these provisions are met, all projects receiving a 401 certification should satisfy the fundamental requirements of the AIP.

If EPA wants to review the specific guidance establishing the level of review afforded to 401 certifications, it may find documents containing guidance at the following web addresses:

<http://www.mvs.usace.army.mil/permits/guidelines.pdf>

<http://www.nwk.usace.army.mil/regulatory/compensatory%20mitigation/MSMM%20February%202007.pdf>

10. Page 41 - Appendix 2.

See responses to Comment 6.

11. Page 42 - Appendix 3

See responses to Comment 1.